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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Martin Schneider

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EXAMINER

GREGORY, BERNARR E

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,244	Applicant(s) SCHNEIDER, MARTIN	
	Examiner Bernarr E. Gregory	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 11-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 11-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/16/2006, 11/7/2008</u> . | 6) <input type="checkbox"/> Other: ____. |

1. The Substitute Specification of 16 June 2006 has been received and has been entered.

2. The subject matter of this application admits of illustration by a drawing to facilitate understanding of the invention. Applicant is **required** to furnish a drawing under 37 CFR 1.81(c). No new matter may be introduced in the required drawing. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). Further, per 37 CFR 1.83(a), the drawings must show every feature of the invention set forth in the apparatus claims. When the required drawings are supplied, Applicant is further hereby **required** to amend the Specification to provide a Brief Description of the Drawings section.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 11-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On line 4 of independent claim 11, it is unclear in context what is meant by the "parameters" being "variable." Does this mean that the parameters are not of a fixed value?

On line 3 of dependent claim 12, the term “transmitting capacity” is unclear in context. The use of this term would seem to indicate data transmission capacity, which could not be the case with a radar.

On line 4 of independent claim 14, the use of the word “driving condition” is indefinite and unclear in context. Is this intended to mean the state of motion of the vehicle?

On line 3 of dependent claim 15, it is unclear in context what is meant by “speed and assistance function.”

On line 2 of dependent claim 16, it is unclear in context what is meant by the term “speed resolution.”

On line 2 of dependent claim 17, it is unclear in context what is meant by the term “distance resolution.”

On line 2 of dependent claim 19, the prepositional phrase “at a high-frequency level” is unclear as to what the phrase is intended to modify and as to what the phrase means per se in context.

On line 2 of dependent claim 19, the relative term “high-frequency” is indefinite and unclear in that it is not made clear what range of frequencies are “high.”

On line 2 of dependent claim 20, the phrase “digital processing in a baseband” is unclear in context as to what is meant by processing being “in a baseband.”

Dependent claims 12-13 are unclear at least in that they depend from unclear independent claim 11.

Dependent claims 15-20 are unclear at least in that they depend from unclear independent claim 14.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 11, 12, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior public use of any radar in a vehicle where the radar only functions when the vehicle is running.

Any vehicle-mounted radar meets the limitations of independent claim 11 in that the transmitting and receiving parameters of the radar are at some level when the vehicle is running and those same parameters are at zero when the vehicle is not running, in that the radar is not operating. This difference in the parameters of the radar means that those parameters are "variable" as claimed in claim 11. Any such radar would, of course, having a "transmitting device" (i.e., the transmitter portion of the radar) and a "receiving device" (i.e., the receiver portion of the radar) as claimed in claim 11.

With respect to the further limitations of dependent claim 12, a vehicle-mounted radar that is in a vehicle that is not running would have, at least, a "transmitting capacity" of zero as opposed to the positive and non-zero transmitting capacity of the radar when it is operating while the vehicle is running. Such a difference in the transmitting capacity would mean that that parameter is "variable."

The remarks with respect to independent claim 14 are substantially those made above with respect to independent claim 11. The claim 14 "driving condition of the motor vehicle" (line 4) is taken as whether the motor vehicle is running or not.

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

8. Claims 11-13, 14, and 17-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Kroeger et al ('842).

With respect to independent claim 11, Kroeger et al ('842) discloses a radar "for a motor vehicle" (line 1 of claim 11) as stated in the Abstract of that reference, which as a radar has the claim 11 "transmitting device" (line 2) and the claim 11 "receiving device" (line 3) as the radar transmitter circuitry and the radar

receiver circuitry in the overall Kroeger et al ('842) apparatus. Among the parameters that are varied in Kroeger et al ('842) as claimed in claim 11 (lines 3-4) are power, pulse repletion frequency, and pulse duration as mentioned in the Abstract of Kroeger et al ('842). In addition, the parameters of antenna width and direction are varied by the switching of the antennae in Kroeger et al ('842). For example, please see column 3, lines 1-14, which passage state that different antennae are of different angular ranges. Thus, the further limitations of dependent claims 12-13 are met at least as to the antenna switching, but also as to "transmitting frequency," which may broadly be read onto the variable PRF.

The remarks with respect to independent claim 14 are substantially those made above with respect to independent claim 11. In addition, please note at column 3, lines 54-65 that a feedback signal is used to control the switching of switches 121 and 122, which would meet the claim 14 limitation of the changing of parameters "as a function of the driving condition of the motor vehicle." It is noted here that the driving of the motor vehicle would change the sensed return signal that are used to control the switching in view in column 3 of Kroeger et al ('842).

The further limitations of dependent claim 17 are met by the switching of the PRF, the pulse duration, the power, or the antenna used, in that the changing of any of these would affect "distance resolution" to some degree.

The further limitations of dependent claim 18 are met by the switching of antennae in Kroeger et al ('842) as mentioned at column 3, lines 1-14 of Kroeger et al ('842), where different antennae have different angular ranges.

The further limitations of dependent claim 19 are met by Kroeger et al ('842) in that the antennae in Kroeger et al ('842) are switched and in that whatever the switching rate is for the antennae in Kroeger et al ('842), that rate could broadly be called "high-frequency."

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 11-14 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Tresselt ('655).

With respect to independent claim 11, as a radar system, Tresselt ('655) has a "transmitting device" as the transmitter portion of the radar system, a "receiving device" as the receiver portion of the radar system, and has variable parameters as to at least the "two discrete frequency signals" (Abstract of the applied reference) and as to the "variable interval periods" (Abstract of the applied reference).

With respect to the further limitations of dependent claims 12 and 13, at least the transmitting frequency and the receiving frequency are "variable" in due to the alternate transmission of "two discrete frequencies" as mentioned in the Abstract of Tresselt ('655).

With respect to independent claim 14, the limitations of this claim are met by Tresselt ('655) in that the radar in Tresselt ('655) varies the "interval periods" as a function of "vehicle speed and/or range" (Abstract of the applied reference). It is noted that the speed and the range of a target are both a function of the how the motor vehicle is being driven.

With respect to the further limitations of dependent claim 17, the changing of the frequencies or of the interval periods would have some degree of effect on "distance resolution."

11. Claims 11-14 are rejected under 35 U.S.C. 102(b) as being anticipated by the prior public use of any FMCW radar in a vehicle.

With respect to independent claim 11, any FMCW has a "transmitting device" as the transmitter portion of the radar system and a "receiving device" as the receiver portion of the radar system. In addition, the transmitting and receiving frequencies are variable from the input of a sawtooth (or other waveform) into the voltage controlled oscillator in the radar. Thus, the parameters of transmitting frequency and receiving frequency are "variable" in an FMCW radar. In that "transmitting frequency" is listed as one of the parameters

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in dependent claim 12 and in that "receiving frequency" is listed as one of the parameters in dependent claim 13, the further limitations of these dependent claims are met by an FMCW radar as discussed above.

With respect to independent claim 14, the remarks are substantially those made above with respect to independent claim 11. In addition, the claim 14 "driving condition of the motor vehicle" is taken as whether the vehicle is running. That is to say, a vehicle-mounted FMCW radar would not be operating if the vehicle were not running, so that the operating frequency of the radar is a function of whether the vehicle is running.

12. Claims 11-20 are so unclear that it is not possible to indicate potential allowable subject matter at this time.

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The examiner-cited prior art herewith that has not been applied above is of general interest for showing the state of the related prior art.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bernarr E. Gregory whose telephone number is (571) 272-6972. The examiner can normally be reached on weekdays from 7:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H. Tarcza, can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Bernarr E. Gregory/
Primary Examiner, Art Unit 3662